Applicant: Heinz Florian, et al. Attorney's Docket No.: 14219-087US1 Client Ref. No.: P2002,0911 US N

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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A piezoelectric component comprising:

a stack of ceramic layers; and

electrode layers between ceramic layers in the stack;

wherein the electrode layers comprise copper; and

wherein the ceramic layers comprise lead-zirconate-titanate that is doped with Nb. a material having a composition of Pb_{0.988} $V_{0.012}(Zr_{0.504+x}Ti_{0.472-x}Nb_{0.024})O_{3.000}$, where -0.05 $\leq x \leq$ 0.05 and V stands for a vacancy.

2. (Canceled)

- 3. (Currently Amended) The piezoelectric component of claim 2 1, wherein a ratio of Ti to Zr in the material corresponds to a morphotropic phase boundary.
- 4. (Previously Presented) The piezoelectric component of claim 1, wherein the ceramic layers are substantially free of Ag.

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5. (Previously Presented) The piezoelectric component of claim 1, wherein the ceramic layers and the electrode layers are sintered together.

- 6. (Previously Presented) An actuator comprising the piezoelectric component of claim 1.
- 7. (Previously Presented) The actuator of claim 6 having a deflection of about $30\mu m$ and an energy loss of about 20mJ.
- 8. (Currently Amended) The piezoelectric component of claim 2 1, wherein a dielectric constant of the material varies less with temperature than does a dielectric constant of an Nddoped ceramic having a composition of $Pb_{0.97}V_{0.01}Zr_{0.55515}Ti_{0.4485}O_3$.
- 9. (Previously Presented) The piezoelectric component of claim 1, wherein the electrode layers are substantially free of holes.
- 10. (Previously Presented) A piezoelectric component comprising: ceramic layers comprise a material having a composition of Pb_{0.988}V_{0.012}(Zr_{0.504+x}Ti_{0.472-} $_{x}Nb_{0.024})O_{3.000}$, where -0.05 $\leq x \leq 0.05$;

wherein a dielectric constant of the material varies less with temperature than does a dielectric constant of a specific ceramic doped with Nd.

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11. (Previously Presented) The piezoelectric component of claim 10, wherein a ratio of Ti to Zr in the material corresponds to a morphotropic phase boundary.

- 12. (Previously Presented) The piezoelectric component of claim 10, wherein the ceramic layers are substantially free of Ag.
- 13. (Previously Presented) The piezoelectric component of claim 10, wherein the specific ceramic has a composition of Pb_{0.97}V_{0.01}Zr_{0.55515}Ti_{0.4485}O₃.
- 14. (Previously Presented) The piezoelectric component of claim 10, further comprising an electrode layer between at least two of the ceramic layers, the electrode layer being sintered with the at least two ceramic layers.
- 15. (Previously Presented) The piezoelectric component of claim 14, wherein the electrode layer comprises copper.
 - 16. (Currently Amended) A piezoelectric actuator comprising: a ceramic that is substantially free of AG Ag; and electrode layers embedded in the ceramic, the electrode layers comprising copper;

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wherein the ceramic comprises a material having a composition of

 $Pb_{0.988}V_{0.012}(Zr_{0.504+x}Ti_{0.472-x}Nb_{0.024})O_{3.000}$, where -0.05 $\leq x \leq 0.05$.

17. (Previously Presented) The piezoelectric actuator of claim 16, wherein a ratio of Ti

to Zr in the material corresponds to a morphotropic phase boundary.

18. (Previously Presented) The piezoelectric actuator of claim 16 having a deflection of

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about $30\mu m$ and an energy loss of about 20mJ.

19. (Previously Presented) The piezoelectric actuator of claim 16, wherein a dielectric

constant of the material varies less with temperature than does a dielectric constant of an Nd-

doped ceramic having a composition of $Pb_{0.97}V_{0.01}Zr_{0.55515}Ti_{0.4485}O_3$.

20. (Previously Presented) The piezoelectric actuator of claim 16, wherein at least one of

the electrode layers is substantially free of holes.